

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001189**Date Inspected:** 20-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Shen Xue Jun**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG and Tower Mock-up**Summary of Items Observed:**

CALTRANS Quality Assurance (QA) Inspector, Alfredo Acuna was present for the fabrication scheduled for this project at the ZPMC facility in Shanghai, China for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

Item Description	WBS	Dwg No.	Status
1 MT Repairs Areas at the Doubler plate to skin plate A Tower Mock-up 89 M			
After ZPMC QC inspector Mr. Zhou Dong Yun performed magnetic particle testing(MT), the QA inspector performed MT verifications at the partial penetration joint (PJP) connecting the skin A to the doubler plate at the root pass (repair areas only).			
At this locations, Caltrans QA inspector Mr. John Tracy found relevants indications that were repaired by grinding by ZPMC. The QA inspector verified the areas in question, the QA inspector found that the area tested appeared to be in compliance with the contract document. A magnetic particle testing report TL_6028 was issued on this date.			
2 Assembly of the Diaphragm plates to skin plate A Tower Mock-up 77 M			
The QA inspector observed ZPMC was performing assembling operations in between the skin A and the diaphragm assembly. The QA inspector observed that ZPMC appeared to be in general compliance with their approved fabrication procedure.			
3 Welding Consumable Records and Electrodes Drying			
The QA inspector observed that ZPMC started to use the welding consumable reports to control the welding consumables approved by Caltrans on the ZPMC's welding quality control plan (WQCP). Before, ZPMC was using welding consumable report written in Chinese characters.			
The QA inspector had a conversation with ZPMC QC representative Shen Xue Jun, the QA inspector brought to the			

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attention of Mr. Shen Xue Jun that the QA inspector wanted to witness ZPMC drying operations for the electrode TL-508 (AWS E7018). Mr. Shen Xue Jun agreed and said that ZPMC would inform Caltrans representatives before ZPMC start the drying operations. Also, Mr. Shen Xue Jun showed the records that ZPMC dries the electrodes approximately every 1 or two months.

- 4 Root Pass Crack at the Skin D, MA-22 Subassembly Tower Mock-up 89 M  
ZPMC QC Shen Xue Jun informed to the QA inspector that the root pass for the weld joint # 8 at the Skin D, MA-22 subassembly cracked from start to end. See the photograph below. Mr. Xue Jun Xue said that ZPMC would removed the weld completed, perform magnetic particle inspection and rewelded again.



- 5 OBG Gantry U-ribs

The QA inspector observed that ZPMC was practicing with the second U-ribs gantry on this date. See photograph below.



### Summary of Conversations:

As noted above.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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**Inspected By:** Acuna,Alfredo

Quality Assurance Inspector

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**Reviewed By:** Cuellar,Robert

QA Reviewer